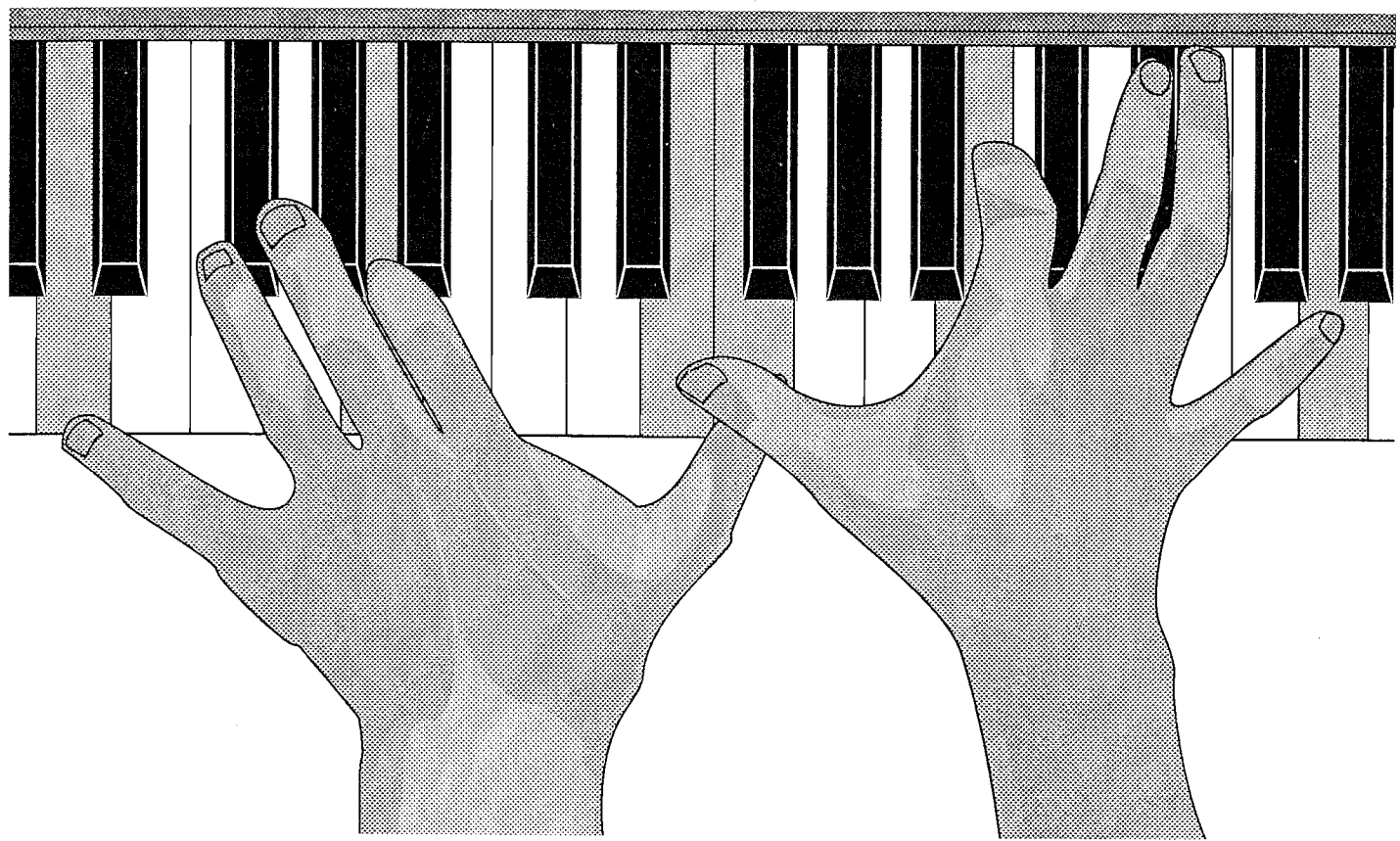

Part 1: KEYBOARD PERFORMANCE



Part 1: KEYBOARD PERFORMANCE

Overview

Your DX7 II is packed with many expressive performance features.

- Its keyboard can be retuned and split.
- The keys themselves are velocity and pressure sensitive.
- The pitch bender has four different bending modes.
- Along with a modulation wheel (mod wheel), Yamaha has also given you the option of using breath pressure, foot motion, or any external MIDI controller to make expressive changes to your sounds *while you're performing*.
- Not only does the DX7 II have these musically useful controllers, but its voice, performance, and tuning memory system allows you to store many different voice, controller, and tuning setups. With the DX7 II's *Performance Mode* you can recall complete instrument setups with the touch of a single button.

All in all, the DX7 II is a true player's instrument. Unfortunately, the sounds that come with the DX7 II (as well as the massive library of third party sounds available) rarely take full advantage of the musical potential offered by these features. Most presets have some velocity and after touch vibrato effects built in but not much more. As a result most DX7 II players haven't been exposed to the full range of dynamic expression offered by this unique instrument.

In the following pages, I want to show you how to unlock the full performance potential of your DX7 II. I'll share with you several performance techniques for using the split keyboard, micro tuning, bend modes, after touch and other DX7 II controllers that I've found to be particularly useful. I've included several musical examples and exercises for each performance technique. You can try them out with the voices, performances and micro tunings I've provided; and I'll show you how to patch them into any of your favorite sounds too. So power up your DX7 II and read on.

Keyboard Techniques

About Keyboard Techniques...

In this section of the book, I'm going to introduce you to several different approaches to playing the keyboard. They'll show you how to play chords, melodies and rhythms that are characteristic of non-keyboard instruments. The basic idea behind these techniques is to redistribute the keyboard notes under your fingers so you can play in the same pitch range with either hand. Some of these techniques can be translated to other keyboard instruments. Others will take advantage of unique DX7 II features such as the *split mode* and *micro tuning*. I've included short musical examples that illustrate the basics of each technique. I've also written up some easy exercises to help you develop a familiarity with these alternative ways of playing the keyboard. Be sure to spend some time exploring these new ideas. You'll find, like I have, that they will allow you to play many types of instrumental parts with an authenticity unobtainable any other way.

By now, you've already tried all of the preset voices and performance setups that came with your DX7 II. You may have also collected a large library of additional voices and performance setups as well. Many DX7 II presets are keyboard sounds, electric pianos, organs, harpsichords, etc., but there are many superb, non-keyboard sounds as well. In fact, many of the DX7 II's new voicing and performance features really shine when it comes to making such sounds as acoustic or electric guitars, wind instruments, and string instruments.

If you want to play convincing guitar, wind, or string parts, having good sounding voices will get you half of the way there. To get the rest of the way, you'll have to play notes, chords and rhythms the way a guitar,

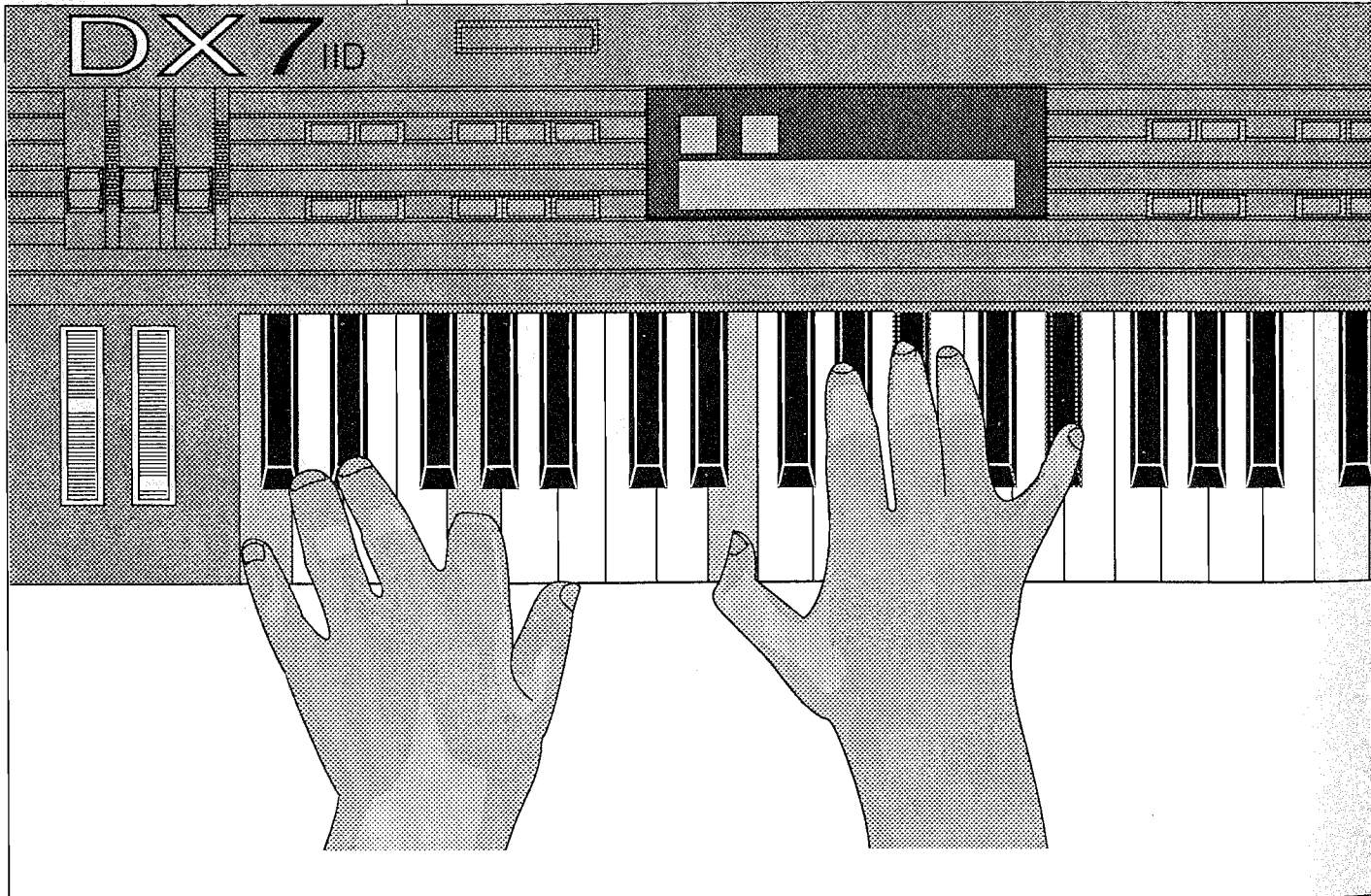


Figure 1: Standard keyboard

wind or string player would. We keyboard players base the way we play notes around the structure of the piano-style keyboard. We don't think much about how the keyboard influences the way we play notes. However, what we play, and the way we play it, is definitely affected by the mechanics of the keyboard itself. Here are some of the ways the layout of a standard keyboard structures our playing (*Figure 1*):

The Standard Keyboard's Influence On Performance

- Each hand can play a separate part (bass and chords-chords and melody).
- Chords are frequently played as blocks. (Up to ten notes down and up at the same time)
- Arpeggios and melodies tend to be phrased in a linear order (low to high, high to low)
- Chords can be voiced with up to ten notes (more, if the sustain pedal is used).
- Chord voicings can span a wide range of pitches. Chords voiced with two hands can easily span four or more octaves.
- Rapidly playing a series of *different* notes or chords is relatively easy. Rapidly playing the *same* note or chord can be quite difficult. (Rhythms that use alternate fingers or hands can be played more quickly than rhythms that use the same finger or hand.)
- Unison playing (two or more notes of the same pitch at once) is not possible on a standard keyboard since each key plays a different note.
- Certain types of dynamic expression like vibrato, tremolo, and pitch bending are not possible with a standard keyboard.

If you've been playing keyboards for any length of time at all, none of these factors will come as a surprise to you. They're just "facts of life" that you take for granted when you play. If you play guitar instead of keyboards, there are a different set of factors that would determine how you put notes together to play music. Here are some of the things about the structure of a six string guitar that will influence the way a guitarist plays (*Figure 2*):

The Six String Guitar's Influence On Performance

- Both hands are generally used to play one part. (The left hand selects pitches and the right hand articulates rhythms.)
- Chord voicings can have no more than six notes at a time.
- Chords tend to be arpeggiated or strummed. (Block playing isn't possible if the guitarist is using a pick.)
- The notes of many guitar chord voicings tend to fall within a range of about two octaves.
- Arpeggios and melodies tend to be phrased in the order of the strings or right hand fingering patterns. This tends to produce non-linear phrases.
- Notes and chords can be repeated very quickly with ease by simply strumming up and down.
- Unison playing is possible since more than one string can play the same pitch.
- Dynamic expression with vibrato and bending are very characteristic of guitar playing.

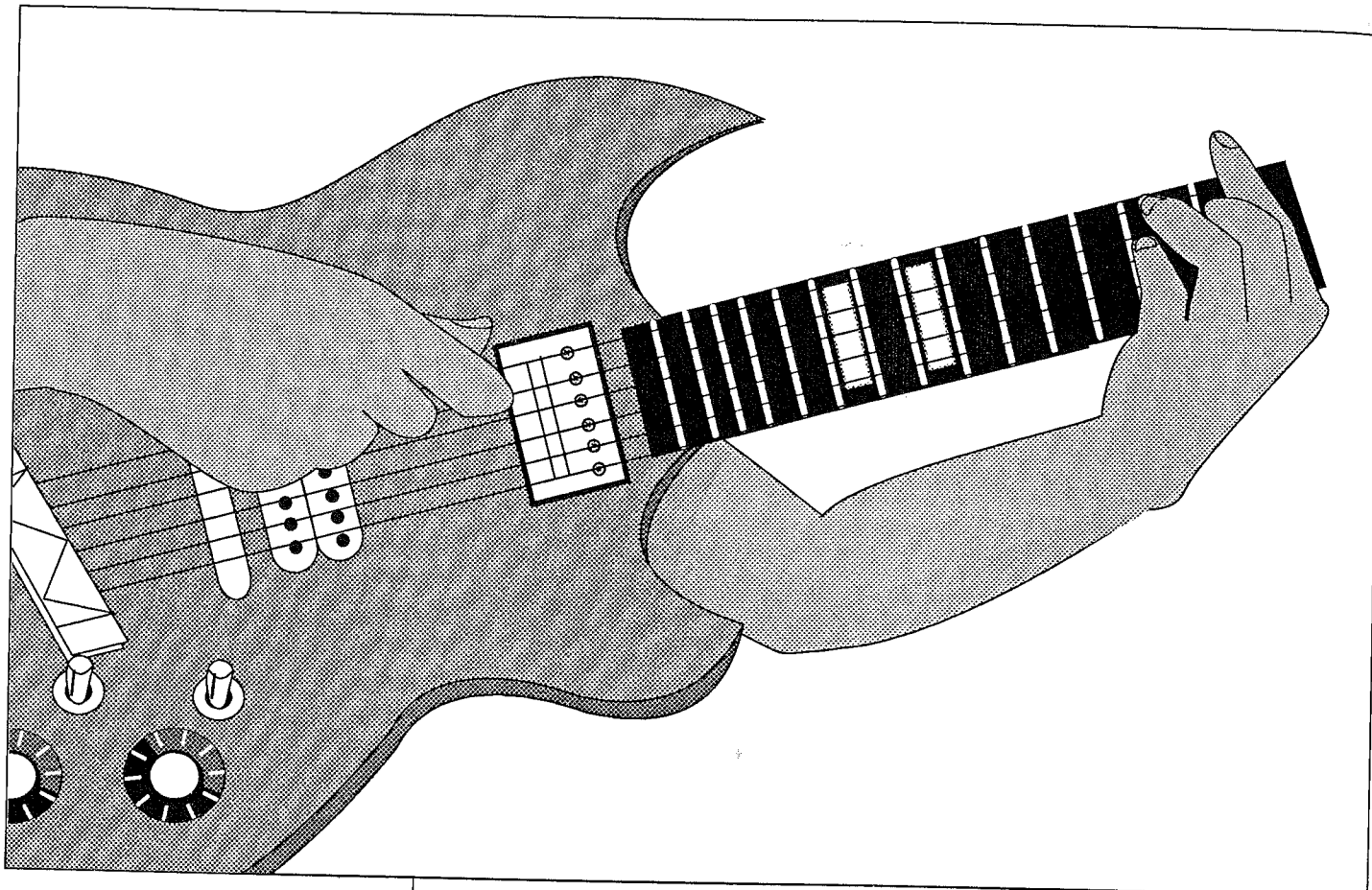


Figure 2: Six-string guitar

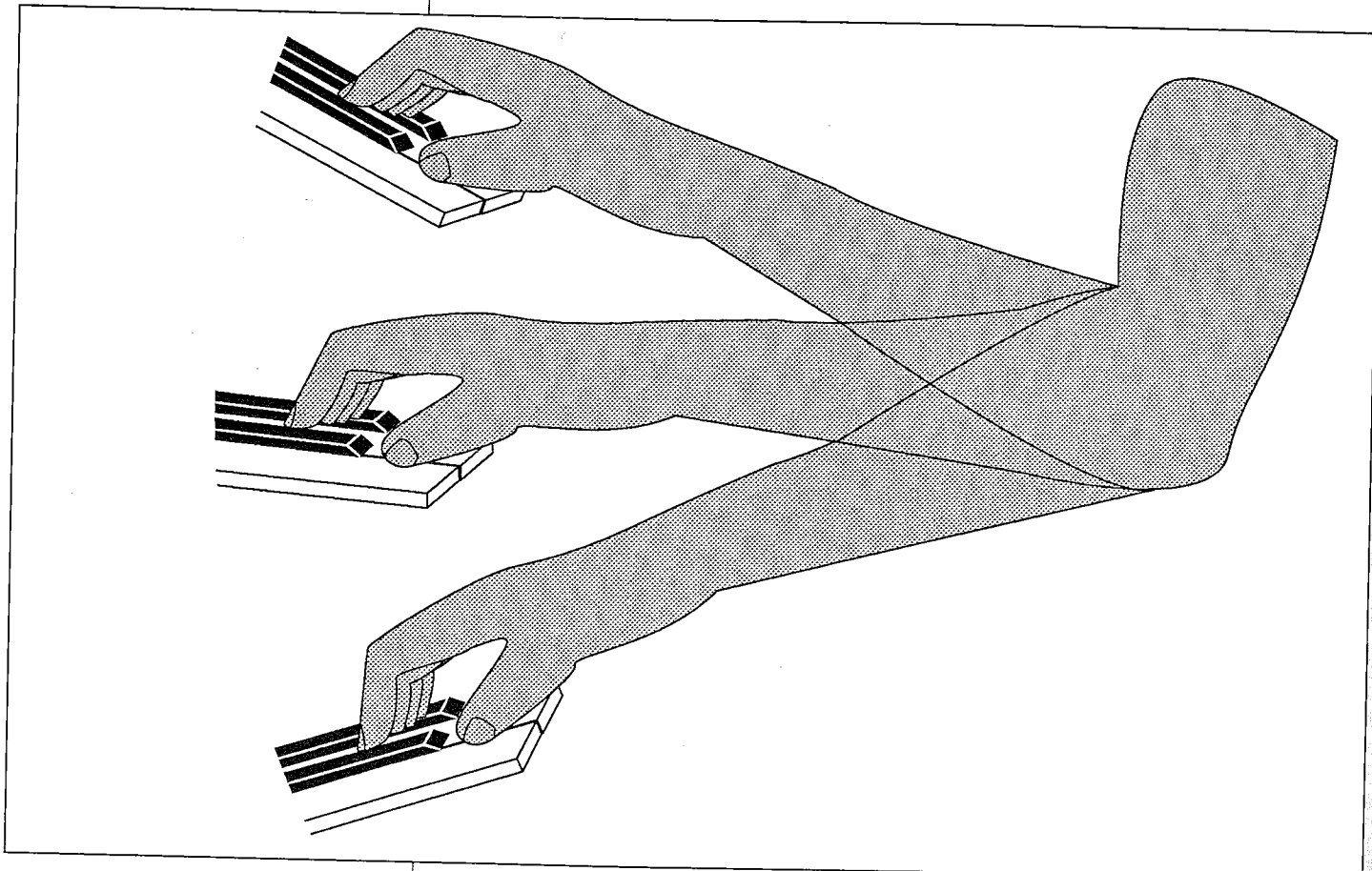


Figure 3: Tilt the keyboard so that the keys are parallel to your forearms when you are in your normal playing position.

An instrumental part is made up of two components—the instrument's sound and the performer's techniques. Your DX7 II can imitate the sounds of many types of instruments. It's up to you to learn how to imitate the performance techniques. If, for instance, you want to play guitar-like parts, then you'll need some guitar-like voices and you'll also need to play with some guitarist-like techniques. Or, if you want to play violin-like parts, you'll need violin like voices, and you'll need to know how to play those voices with violinist-like techniques. That's exactly the kinds of things I'll be showing you how to do in this book.

Positioning the Keyboard and Hands Effectively

The relative position of the keyboard to the hands and forearms is a fundamental factor of all keyboard playing. You may prefer to play sitting or standing. Your DX7 II may be at the bottom, top, or in the middle of a stack of other keyboards. Regardless of where it is, or whether you play standing or sitting, it's important to place your DX7 II so that the keyboard is properly positioned.

If the DX7 II is above your elbows when you play, then the front of the keyboard should be tilted down (towards the floor). If the DX7 II is below your elbows when you play, then the front of the keyboard should be tilted up (towards the ceiling). If the DX7 II is at the same height as your elbows, the keyboard shouldn't be tilted at all.

When you tilt the keyboard, adjust it so that the angle of the keys is parallel with the angle of your forearms when you play (*Figure 3*). This position will keep your wrists straight, giving your fingers more freedom of motion. It also makes it possible for you to use the muscles of your upper arms and back freely. These come into play when you use dynamics like after touch and velocity, as well as when you play rapid chord rhythms.

Poor keyboard positioning will force you to play with your wrists bent backwards. This isolates the hands from the upper arms and back and forces your fingers and forearms to do all the work by themselves. You'll find that it is both awkward and tiring to play for any length of time with your wrists bent backwards. Take the time to reposition your keyboard if you need to. It'll be worth the effort.

Dovetail Voicings

The first keyboard technique I want to show you is how to voice chords by overlapping your hands. I call these *dovetail* voicings. You'll find that dovetail voicings for arpeggios, glissandos, and pyramids can be used to imitate guitar-like finger picking. They will also help you to breathe new life into common voicings by allowing you to play notes in an unexpected order. Sharing the arpeggiations between two hands will give you a level of rhythmic control and freedom of variation that would be very difficult to achieve with one hand alone, or by voicing the chord without overlapping hand positions. Also, although the DX7 II has no onboard arpeggiator, you can create many of the same effects and variations with the dovetail technique.

When a chord is split between two hands, the typical approach is to put the lower notes in the left hand and the upper notes in the righthand (*Figure 4*).

Performances for Dovetail Examples

Try the dovetail voicing examples with the following performances:

4: Jazz Pressure Flange, 5: Verb Fanfare Brass, 8: Bowed Strings, 13: String Verb Choir, 15: Hi Key Pedal Steel, and 23: Jazz Tremolo Pedal

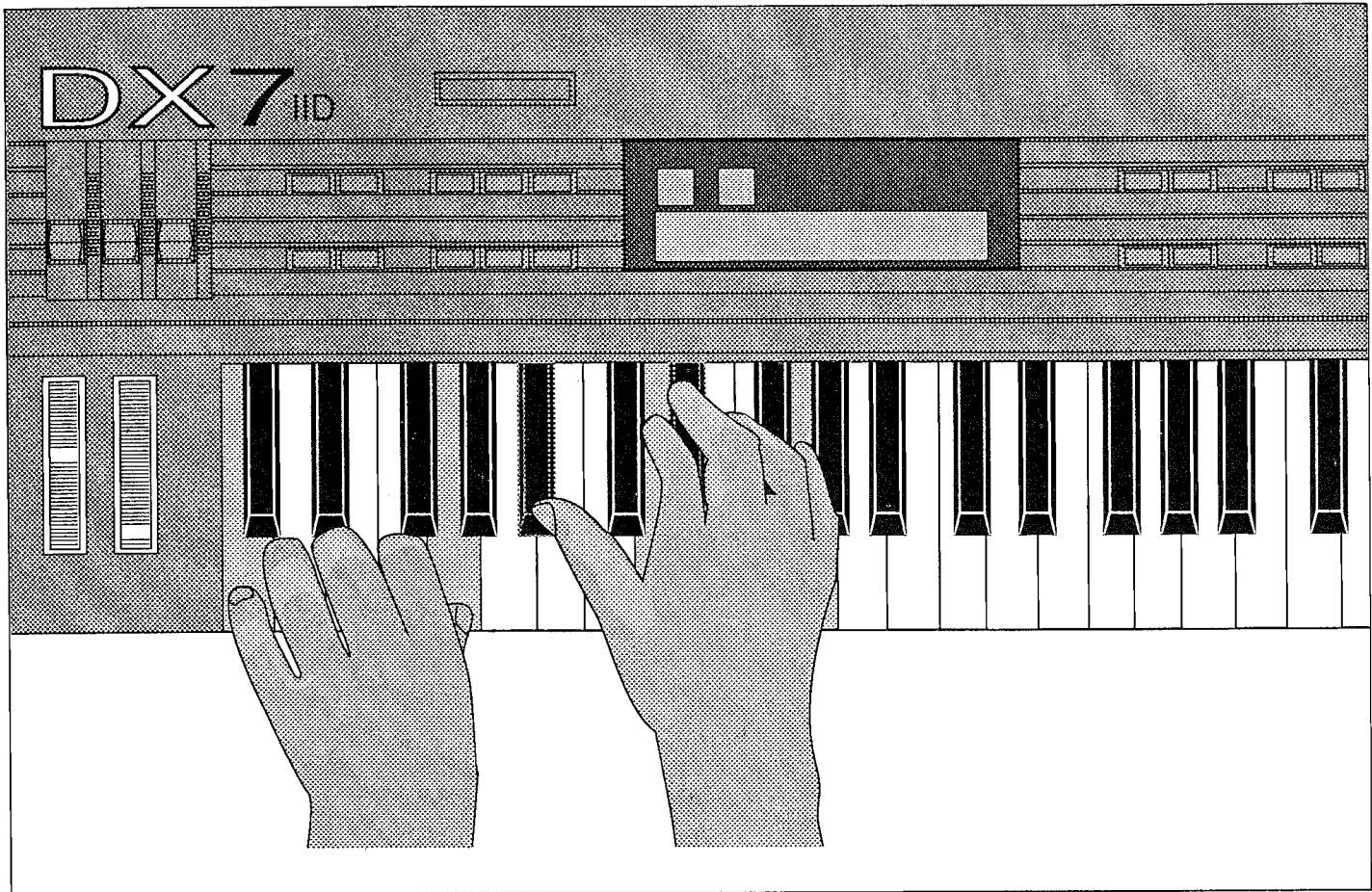


Figure 4: C minor 9 chord voiced for two hands

When the chord is arpeggiated, the fingers of each hand are played in order. (*Example 1*) The notes are heard in a linear sequence—low notes to high notes, or high notes to low notes. This is the standard approach to keyboard arpeggios.

Example 1

Cm9

Voiced for two hands Natural note order for arpeggios and glissandos

The chord may be arpeggiated in one of three ways (*Example 2*). In a standard arpeggio, the notes of the chord are played one at a time. In a glissando, the notes of the chord are played and held very rapidly. (The effect is like strumming a guitar or harp.) The third type of arpeggiation is the pyramid. Here, each note is played and held until the entire chord is heard.

Example 2

Arpeggio Glissando (Up) Glissando (Down) Pyramid

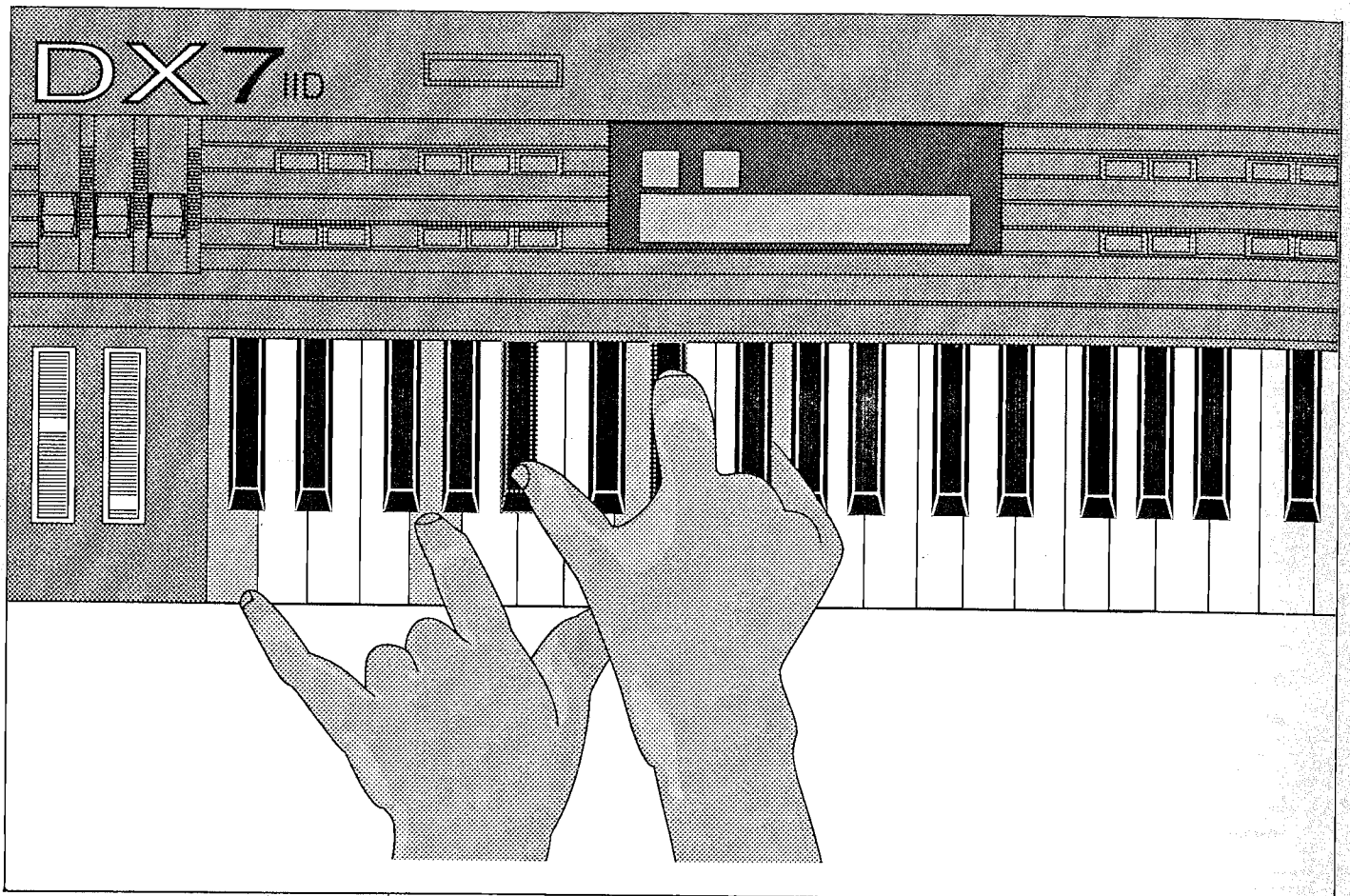


Figure 5: Here's the same chord voiced as a dovetail. Notice that the thumbs overlap each other. In this illustration (and others throughout the book), unused fingers are tucked under the hands to give you a better view of the notes being played. This isn't necessary when playing the voicings.

To create a dovetail voicing, take the same chord and redistribute the notes so that the hand positions overlap, i.e. the left thumb crosses under (or over) the right thumb (*Figure 5*). Many useful voicings can be made by dividing the notes of the chord equally between both hands. For example, each hand plays three notes, or each hand plays two notes. Using the same number of notes in each hand makes it easy to play precise rhythm and pitch variations. (We'll look into that in a bit.)

Example 3

Dovetail Voicing

Natural order for arpeggios, glissandos, and pyramids

When the dovetail voicing is arpeggiated, use the same fingering order as you normally would. For example: low-to-high fingers in the left hand then low-to-high fingers in the right hand. The notes are not heard in their natural ascending order. The overlapped hand position produces a non-linear arpeggiation (*Example 3*). This is not often heard in keyboard performances, but it is instantly recognizable as a guitar style. Voicings for wind and brass sections are often scored this way as well. In fact, I've borrowed the term, dovetail, from an arranging technique that overlaps a voicing between two instrumental sections.

Note Variations for Dovetail Voicings

Since the notes of a dovetail voicing are split between two hands, there are several basic ways to approach arpeggiating (or "strumming") chords. Here are several ways to arpeggiate the Cm9 chord (*Example 4*). You should get comfortable with each of these variations. Think of them as different arpeggiator "modes."

Example 4

Pattern Variations For Dovetail

Cm9 Cm9 Cm9

Left-Right Right-Left Alternating Hands-Up

Cm9 Cm9 Cm9

Alternating Hands-Down Alternating Hands-Up/Down Alternating Hands-Down/Up

Pattern Variations For Dovetail

Cm9 Cm9 Cm9

Left-Right Right-Left Alternating Hands-Up

Cm9 Cm9 Cm9

Alternating Hands-Down Alternating Hands-Up/Down Alternating Hands-Down/Up

Creating Dovetail Chords

Many dovetail voicings can be built by overlapping simple three note chords in each hand. As keyboard players, we're used to playing major or minor triads with either hand. You'll find that this familiarity with triads makes it easy to create dovetail versions of more sophisticated voicings. Here's how to create major 9th, minor 9th, and dominant 9th voicings by using simple triads in each hand (*Example 5*).

Example 5

Dovetails Built From Triads

The diagram shows two systems of musical notation for Example 5, illustrating dovetail chords built from triads. The first system is labeled "Close Position" and the second is labeled "Open Position".

Close Position:

- Chord 1:** Gmaj7/9. R.H. notes: 7 (F#), 5 (D), 9 (B). L.H. notes: 3 (D), 1 (G), 5 (B).
- Chord 2:** Gm7/9. R.H. notes: 7 (F), 5 (D), 9 (B). L.H. notes: 3 (Bb), 1 (G), 5 (B).
- Chord 3:** G7/9. R.H. notes: 7 (F), 5 (D), 9 (B). L.H. notes: 3 (D), 1 (G), 5 (B).

Open Position:

- Chord 4:** Gmaj7/9. R.H. notes: 9 (B), 5 (D), 7 (F#). L.H. notes: 3 (D), 5 (B), 1 (G).
- Chord 5:** Gm7/9. R.H. notes: 9 (B), 5 (D), 7 (F). L.H. notes: 3 (Bb), 5 (B), 1 (G).
- Chord 6:** G7/9. R.H. notes: 9 (B), 5 (D), 7 (F). L.H. notes: 3 (D), 5 (B), 1 (G).

Of course, you're not limited to using just triad structures. Here are some voicings built with fourths and fifths (*Example 6*).

Example 6

Dovetails In Fourths & Fifths

The diagram shows musical notation for Example 6, illustrating dovetail chords built with fourths and fifths. It consists of three measures:

- Measure 1:** Gmaj7(13). R.H. notes: 13 (E), 3 (D), 7 (F#). L.H. notes: 9 (B), 5 (D), 1 (G).
- Measure 2:** Gm7(13). R.H. notes: 13 (Eb), 3 (D), 7 (F). L.H. notes: 9 (B), 5 (D), 1 (G).
- Measure 3:** G7(13). R.H. notes: 13 (E), 3 (D), 7 (F). L.H. notes: 9 (B), 5 (D), 1 (G).

You're voicings don't have to have six notes. You can create dovetails for all of the diatonic 7th chords with two notes in each hand (*Example 7*).

Example 7

Four Note Dovetails

Diagram illustrating four note dovetail voicings for C, Cmaj7, Cm7, and C7. The right hand uses fingers 3 and 5, and the left hand uses fingers 1 and 7.

You can overlap more than just your thumbs in a dovetail voicing. This will put more notes in the chord "out of order." When more than two fingers overlap, the voicing may be hard to play on the keyboard (*Example 8*). (I'll show you another way to approach knuckle busters like these later on in *Unison Tuned Arpeggios*.)

Example 8

Dovetails With 3 Fingers Overlapped

Diagram illustrating dovetail voicings with 3 fingers overlapped for Em11 and Ebm11. The right hand uses fingers 9, 11, and 3, and the left hand uses fingers 7, 5, and 1. The Em11 voicing is labeled "Tricky" and the Ebm11 voicing is labeled "Very Awkward".

Dovetails can be a very effective way to contrast open voiced chords. Here's a simple progression voiced with open harmonies (Example 9).

Example 9

Open Voice Progression

Emaj7#11 Cmaj7#11 Emaj7#11(13) Dm9(11)

This dovetail part contrasts the open voicings with lots of major and minor 2nd intervals (Example 10). Note that these chords have three overlapping fingers.

Example 10

Dovetail Part For Progression

Play As Pyramids

Emaj#11 Cmaj7#11

Emaj7#11(13) Dm9

Fingering Patterns for Dovetail Voicings

There are sixteen basic fingering patterns for six and four note dovetail voicings. They are given below in *Example 11*. In the previous examples, I provided you with the chord spellings for major, minor, and dominant C7, C9 and C13 chords voiced as dovetails. The scale tones for each type of chord were also given so you can rebuild them over any root note. Practice playing each type chord, starting from any root note, with all sixteen patterns. Learn to play each pattern as an arpeggio, glissando and pyramid.

Example 11

Fingering Exercises For 6 Note Dovetails

Gmaj7/9

Continue fingering pattern associated with each pitch for the entire exercise.

Fingering Exercises For 4 Note
Dovetails
Cmaj7

The first system of the exercise consists of two staves in 2/4 time. The right staff contains a sequence of four notes: C4 (quarter), D4 (quarter), E4 (quarter), and F4 (quarter). The left staff contains a sequence of four notes: F3 (quarter), E3 (quarter), D3 (quarter), and C3 (quarter). Fingerings are indicated: 1 for C4, D4, F3, and C3; 2 for E4, F4, E3, and D3. The notes are beamed in pairs (C4-D4, E4-F4, F3-E3, D3-C3) and connected by a thick black line.

Continue fingering pattern associated with each pitch for the entire exercise.

The second system of the exercise consists of two staves in 2/4 time. The right staff contains a sequence of four notes: G4 (quarter), A4 (quarter), B4 (quarter), and C5 (quarter). The left staff contains a sequence of four notes: B3 (quarter), A3 (quarter), G3 (quarter), and F3 (quarter). The notes are beamed in pairs (G4-A4, B4-C5, B3-A3, G3-F3) and connected by a thick black line.

The third system of the exercise consists of two staves in 2/4 time. The right staff contains a sequence of four notes: D5 (quarter), E5 (quarter), F5 (quarter), and G5 (quarter). The left staff contains a sequence of four notes: E4 (quarter), D4 (quarter), C4 (quarter), and B3 (quarter). The notes are beamed in pairs (D5-E5, F5-G5, E4-D4, C4-B3) and connected by a thick black line.

The fourth system of the exercise consists of two staves in 2/4 time. The right staff contains a sequence of four notes: A5 (quarter), B5 (quarter), C6 (quarter), and D6 (quarter). The left staff contains a sequence of four notes: B4 (quarter), A4 (quarter), G4 (quarter), and F4 (quarter). The notes are beamed in pairs (A5-B5, C6-D6, B4-A4, G4-F4) and connected by a thick black line.

Permutation Patterns

Dovetails don't have to have the same number of notes in each hand. Here are some five and seven note voicings (*Example 12*):

Example 12

5 & 7 Note Dovetail Voicings
9th Chords

13th Chords

Musical notation for Example 12. The top staff shows 9th chords: Cmaj7/9 (notes: 3, 5), Cm7/9 (notes: 3, 5), and C7/9 (notes: 3, 5). The bottom staff shows 13th chords: Gmaj7#11(13) (notes: 9, 7), Gm11(13) (notes: 9, 7), and G7#11(13) (notes: 9, 7). Fingerings are indicated by numbers 1-5.

Voicings with unequal numbers of notes in each hand produce permutations when arpeggiated. A five note voicing will "turn over" every twelve notes. A seven note voicing turns over every twenty-four notes. The permutations can add tension and motion to what would otherwise be a static harmony part. Patterns with alternate fingering sound particularly good with permutation patterns. Try the voicings above with these fingering patterns (*Example 13*).

Example 13

Permutation Patterns
5 Note Dovetails
Cmaj7/9

Musical notation for Example 13. The top system shows a 5-note dovetail pattern in 4/4 time, with the right hand playing a five-note arpeggio (C-E-G-A-B) and the left hand playing a five-note arpeggio (C-B-A-G-F). The bottom system shows the same pattern in 6/8 time. Fingerings are indicated by numbers 1-3.

Permutation Patterns For 7 Note Dovetails

Gmaj7#11(13)

The image shows two systems of musical notation for the chord Gmaj7#11(13). The first system is in 4/4 time, with the right hand playing a melody of quarter notes (G, A, B, C, D, E, F#) and the left hand playing a bass line of quarter notes (G, B, D, F#). The second system is in 6/8 time, with the right hand playing a melody of eighth notes (G, A, B, C, D, E, F#) and the left hand playing a bass line of eighth notes (G, B, D, F#). Both systems include fingering numbers (1, 2, 3, 4) and a '1' below the first note of each hand's part.

Performances for Split Mode Unison Tuning Examples

Try the split mode unison tuning examples with these performances:

14:Acoustic F2 Split, 16: Roundworld Rhythm, 27: Percussion Split, and 29: Feedback Gtr Split

Unison Tuning with the Split Mode

Here's a technique that's the key to imitating almost all non-keyboard instruments. The concept is very simple. Retune the keyboard so that either hand can play the same range of pitches. This will allow you to play chords and melodies by alternating hands producing the same musical results as strumming a guitar, bowing a violin, double tonguing a wind instrument, and more. One way to set this up on the DX7 II is with its split mode and *note shift* function.

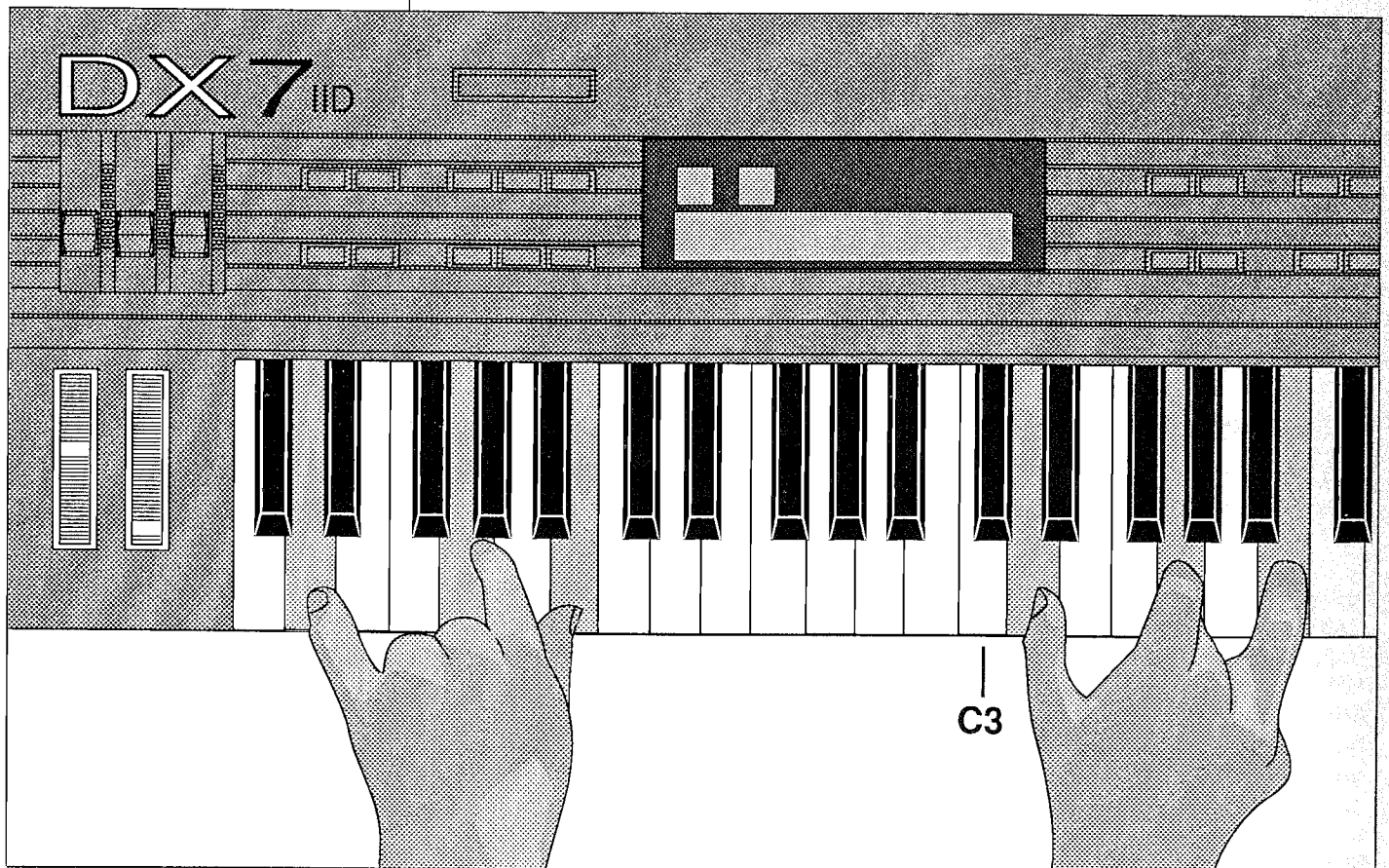


Figure 6: When the DX7 II's keyboard is unison tuned, both hands can play the same range of pitches. Here, the keyboard is split at C3, and the left side of the split is raised two octaves. Now both hands can play identical notes and/or chords. This is essential for strumming, bowing, and finger-picking performance styles.

Usually, we think of the DX7 II's split mode in terms of having a different sounding voice for each hand, such as bass in the left and piano in the right. Another way to use the split mode is to assign the same voice to each side of the split and use the note shift function to transpose one side to the same pitch range as the other. Now, both hands can play the same range of notes with no awkward overlapping (Figure 6). This makes it possible to play melodic/rhythmic parts that would be impossible with one hand. For that matter, split mode unison makes it possible to play chords and phrases that would be impossible to perform even with the dovetail voicing techniques described above.

There are three basic ways to approach playing unison tuning parts.

- *Alternating chords:* You can alternate a single chord part between both hands. This makes it possible for keyboard players to "comp" with authentic sounding strumming, bowing, and breathing styles intrinsic to guitar, string, and wind instrument performance techniques.
- *Repeated notes:* You'll find that a unison tuned keyboard can also allow you to play repeated notes with dazzling speed and accuracy. Mallet percussion, punchy bass lines, slinky funk rhythms, and double tongued brass fanfares that would be difficult or impossible to execute on a normally tuned keyboard become quite easy to master.
- *Arpeggiations:* The third approach to a unison tuned keyboard is to play arpeggios, glissandos, and pyramids. You can create everything from intricate finger picking guitar parts to computer-like arpeggiated lines.

Voices		Mode		A		B		Total volume	Balance	Dual detune	Split point		
		Split	Internal	2	Internal	2							
				ROUNDWOUND		ROUNDWOUND		99	0	-	B2		
				Note shift		+24	0						
Controllers Assign		Sust. FS		On	On	Pan Mode		Range		Select			
FS2	Portamento	SOFT P. RANGE	-	On	On	A:On / B:On		0		LFO			
CS 1	Output Balance (A/B)			On	On			EG Rates		99	99	99	99
CS 2	Dual Detune			On	On	Key		EG Levels		50	50	50	50
Micro tuning		Preset 1		Off	Off								
		Equal Temperament											

Voices		Mode		A		B		Total volume	Balance	Dual detune	Split point		
		Split	Internal	40	Internal	40							
				FeedBk GTR		FeedBk GTR		99	0	-	B2		
				Note shift		+12	-12						
Controllers Assign		Sust. FS		On	On	Pan Mode		Range		Select			
FS2	Portamento	SOFT P. RANGE	-	On	On	A:On / B:On		0		LFO			
CS 1	No Effect			Off	Off			EG Rates		99	99	99	99
CS 2	Dual Detune			On	On	Key		EG Levels		50	50	50	50
Micro tuning		Preset 1		Off	Off								
		Equal Temperament											

Figure 7: You can set up unison tunings in the DX7 II's split mode by altering the note shift parameter for each voices A and B. These tunings split the keyboard at key C3.

Setting Up a Unison Tuned Split Keyboard

Setting up a unison tuning in the split mode is simple to do.

- Enter the split mode and assign the same sound to each side of the split with the **A/B Button**.
- Normally the split point will default to the key labelled "C3" in the middle of the keyboard. You can adjust this to any key with the split point parameter (**Button 28**).
- Once the split point is set, adjust the note shift "A" parameter to tune the left hand up to the same range as the right hand, or the "B" parameter to tune the right hand down into the same range as the left hand (**Button 29**).

Figure 7 shows the unison tuning setups we'll use for our examples:

Unison Tuning Chord Parts

With your right hand, play a G chord with a rapid eighth note rhythm (Example 14). Keep playing legato. (Maintain a smooth sound from attack to attack.)

Example 14

One Hand Eighth Notes
Quickly and Legato

G



Increase the tempo, but try to maintain a smooth legato sound. The faster you play the chord, the harder it is to keep your performance smooth. At some point, you'll find that you have to shift to staccato playing in order to keep the rhythm accurate. Once you've reached the fastest tempo you can play the chord in eighth notes, try to play the part as sixteenth notes (Example 15).

Example 15

One Hand Sixteenth Notes
Quickly and Legato

G



Impossible, right? This is the kind of figure that the guitarist gets to play, not the keyboard player. Here's why. The keyboard requires two different motions to replay each chord in the figure. The hand must be lifted up (off the keys already held), and then placed back down before the new chord is sounded. The guitar requires only one motion to replay the chord. The chord can be sounded on the down stroke of the pick, and again on the up stroke of the pick (Figure 8). Also, the guitar can be played rapidly, with legato since the strings continue to sound right up to the point where they are reattacked. This is more difficult to do on a keyboard since the keys must be lifted (sound stops) before the chord can be played again. You can use the sustain pedal to smooth things out, but that can become quite awkward when you're playing eighth or sixteenth note rhythms.

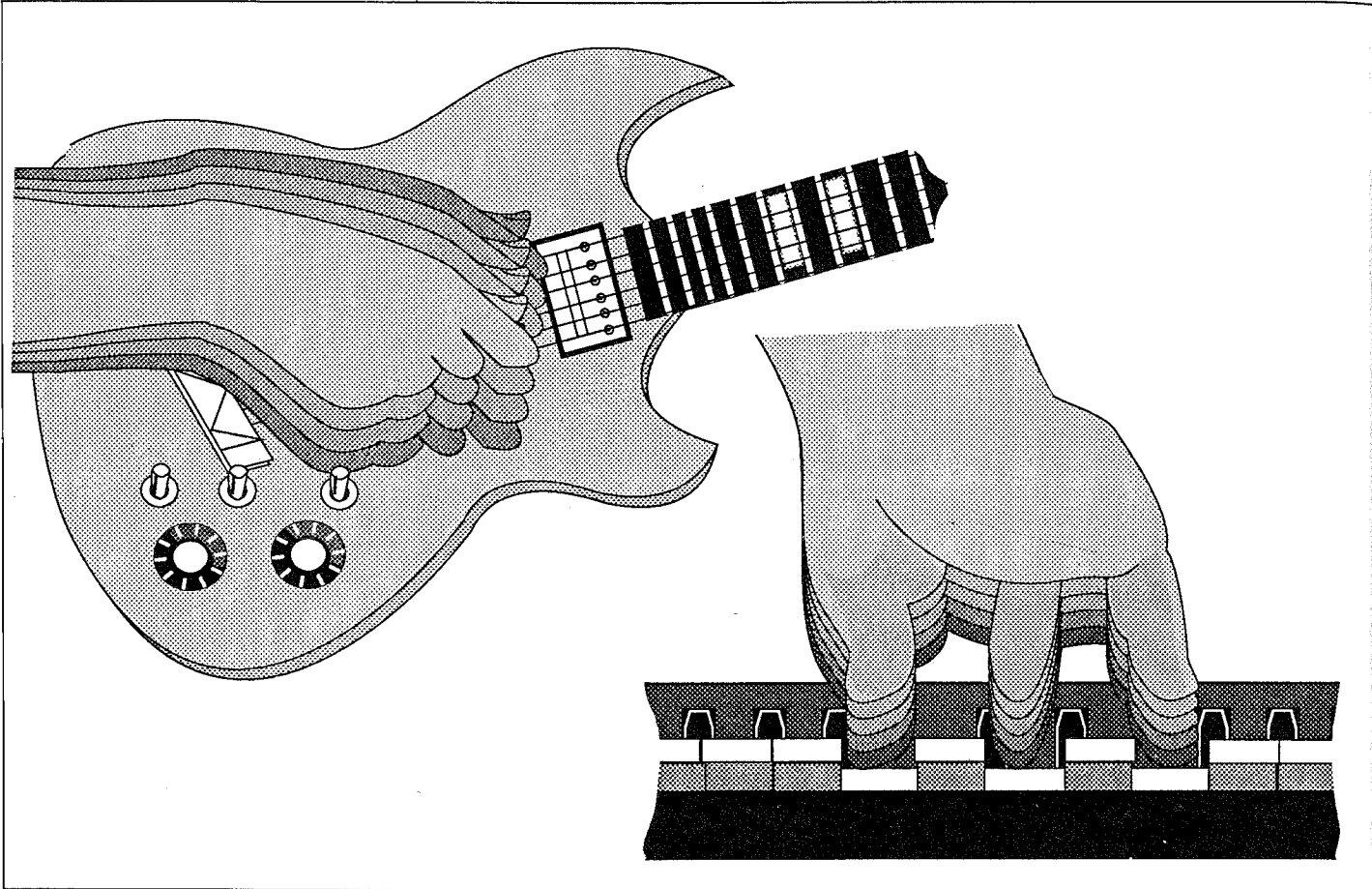


Figure 8: Guitars can sound notes on the up-stroke as well as the down-stroke. Keyboards can only sound notes on the down-stroke. This is one reason why guitarists can play repeated notes and chords more rapidly than keyboardists. Unison tuning the keyboard makes it possible to play repeated notes and chords on the keyboard with the speed of a guitarist.

Let's try it again, but this time voice the identical chord in each hand. This is possible since the left side of the split is tuned to unison with the right side. Play the eighth note rhythm by alternating attacks between the left and right hands (*Example 16*). To keep the part smooth, lift the hand playing the chord off the keys *at the same time* as the other hand strikes the next chord.

Example 16

Alternate Hand Eighths & Sixteenths
Quickly and Legato

G

Things go much easier, right? By alternating between two hands, this way you can play much quicker. Since each hand plays every other note, you're actually playing quarter notes in either hand to hear eighth notes, and eighth notes in either hand to hear sixteenth notes. Try playing the sixteenth note pattern again using alternate hands. You should be able to do it easily. You'll find it's easy to maintain a smooth legato this way too, even at very quick tempos.

Playing Alternating Patterns

I've found it's possible to get an incredible amount of mileage out of this one simple technique. If you are looking to imitate non-keyboard performances, this is the heart for most instruments that require, strumming, bowing, sticking, or breathing (in short, practically everything that doesn't have a keyboard attached to it)! The demands it places on your keyboard technique are slight, but they will take a little practice.

Here are three tips to keep in mind when working up the technique.

- Get used to playing identical notes and chord voicings in each hand without having to think about it. Don't think of your hands as "bass and chords" or "chords and melody," but as "down stroke and up stroke."
- Don't think of the motion of your two hands as separate actions. "Let's see, I put this hand down, and then lift this hand up." Instead, think of your hands as being connected. They move as one, but in opposite directions. I think of them as being on opposite ends of a see-saw. Moving either hand moves the other.
- Learn to play chords with a rapid glissando in either or both hands. This will make it sound like you're strumming strings, not playing a keyboard. Be able to play the glissando in either direction (up or down), independently in each hand.

Basic Unison Tuning Chord Patterns

Now that you know how to strum and bow you're DX7 II, you'll want to learn some of the rhythm patterns used by guitarists, violinists, and other types of musicians. Listen carefully to your favorite players to hear what they do. Here are some patterns to get you started.

Example 17 shows a basic guitar strumming pattern:

Example 17

Basic Guitar Strum Pattern

Legato

C

Example 18 shows the same pattern used in some simple progressions:

Example 18

Legato

Csus4 C

R.H.
L.H.

Repeat in descending half steps

Legato

G D A E

R.H.
L.H.

To add even more authenticity to a guitar performance, try playing the chords with glissandos (*Example 19*). Gliss each hand low-to-high for down stroke strumming, or alternate low-to-high and high-to-low for down and up stroke strumming. Some guitar styles alternate strumming and plucking the strings. You can do the same by playing a gliss with one hand and normally (no glissando) with the other.

Example 19

Basic Strum Articulations

Both hands don't play together. First, the left hand glissandos, then the right hand.

Double Down Stroke Double Up Stroke Down/Up Stroke Down & Pluck

Flamenco Strum

Legato

Try with different strum articulations

Another characteristic use for alternate chords is rock "power chords" (Example 20). Here, a rapid double strum precedes a held chord (usually fourths or fifths). Try it with a little (or a lot of) distortion on your amp.

Example 20

Basic "Power Chord" Strum

Final attack lands on the beat

Final attack pushes beat

Power Chord Intro

Alternating Unison Tuning Chord Voicings

So far we've been alternating between the same voicing in each hand. You can also alternate between different chords in each hand. With the keyboard split and unison tuned, you can play rapid chord changes that would be awkward (or impossible) with a single hand.

For instance, a lot of popular tunes are built around some variation of the basic progression below in *Example 21*. Sometimes the eighth notes are played "straight" and sometimes they're played with a shuffle. The changes may be voiced very simply, such as an alternation between fifths and sixths, or they may be more sophisticated.

Example 21

Shuffle

E5 E6(no3) E5 E6(no3) E5 E6(no3) E5 E6(no3)

It's a simple riff, intrinsic to almost all Rock and R & B tunes, and (to my ears anyway) it generally works best when played on a guitar. (This makes sense since, after all, that's where the riff came from.) Certainly, the part can be played as written with a single hand on a piano or synth, but to me, it sounds too precise and formal when played on a keyboard. Many common versions of this progression can't even be voiced on a standard keyboard. (The fingering would be impossible at eighth or sixteenth note tempos.) So, in most musical situations, a rhythm guitar usually defines the feel of the part, and the keyboards merely provide support. Well, no more! Learn to play these patterns with the alternate chord technique (*Example 22*). Use a guitar-like voice and you'll open up a whole new world of rhythm playing. Not only will the sound be more authentic, but you'll also find that the use of alternate hands allows you to play the rhythms much more aggressively. You'll be able to hit "off the beat" accents cleanly and easily. You may find yourself completely rethinking how you play rock'n'roll and other musical styles.

Example 22

Variations on E Shuffle

E E6(no3) E E6(no3)

Basic Pattern Root Doubled In Left Hand Triads In Right Hand

Shuffle

Musical score for 'Shuffle' in 4/4 time. The right hand (R.H.) plays a sequence of chords: D major, E major, F# major, G major, A major, B major, C major, and D major. The left hand (L.H.) plays a rhythmic accompaniment of eighth notes, with a 'Pick-ups In Left Hand' instruction. The piece concludes with a double bar line.

12 String
Play with a flourish

Musical score for '12 String' in 4/4 time. The right hand (R.H.) plays a sequence of chords: D major, E major, F# major, G major, A major, B major, C major, and D major. The left hand (L.H.) plays a rhythmic accompaniment of eighth notes. The piece concludes with a double bar line and a flourish. The instruction 'Glissandos Throughout' is written below the score.

Bowing

Alternating between different voicings is also the basis for many violin and fiddle performance styles. The alternate hands act like alternate motions of the bow. Many violin parts alternate the bowing between pairs of notes like this (*Example 23*):

Example 23

Musical score for 'Example 23' in 4/4 time. The right hand (R.H.) plays a sequence of chords: D major, G major, A major, and D major. The left hand (L.H.) plays a rhythmic accompaniment of eighth notes. The piece concludes with a double bar line.

Although it looks simple, it's difficult to execute on a keyboard rapidly while maintaining a legato feel. If you split the pairs of notes between your hands on a unison tuned keyboard you'll find it quite easy to "fiddle around" (Example 24)

Example 24

The musical score for Example 24 is presented in six systems, each consisting of two staves. The key signature is D major (two sharps) for the first four systems and G minor (two flats) for the last two. The time signature is 4/4. The music features a complex rhythmic pattern of eighth notes and sixteenth notes, often beamed together. Chord changes are indicated by letters above the staves: D, G, A, D, D, G, A, D, Gm, F, Eb, and D. The notation includes various articulation marks such as accents (>) and slurs. The piece is designed to be played on a unison-tuned keyboard to facilitate a legato feel.

Example 25

Here are more bowing examples: (Example 25).

Triple Tongue Brass Fanfare
Very Fast

Simple Conga Pattern

You'll find that you can also use alternating chord patterns to play a variety of instrumental parts. Try them to simulate the double (or triple) tongue attacks used in brass fanfares or the push/pull rhythms of a Cajun accordion part, for instance.

Repeated Notes with Unison Tuning

You can use alternate hands to play single note melodies or accents that would be difficult or impossible with a normal keyboard. For example, if you want to play percussion-like parts, such as tympani, snare drum, or vibes, you must be able to perform rapid drum rolls (Example 26).

Example 26

Drum Roll

Figures like these are difficult to execute with a single hand on a normal keyboard. Since the same note is played repeatedly, the key must come up before it can be pushed back down again. This puts a limit on how quickly the note can be re-attacked. Also, the fingering required to play the same note repeatedly can be tricky to master. Playing the figure with alternate hands on a unison tuned keyboard resolves both problems (Example 27). The figure can be played very quickly and there is no tricky fingering.

Example 27

32nd Notes Alternating Hands

The musical notation for Example 27 consists of two staves, labeled R.H. (Right Hand) and L.H. (Left Hand), both in 4/4 time. The R.H. staff contains a continuous sequence of 32nd notes, starting on a middle C and ascending stepwise. The L.H. staff contains a continuous sequence of 32nd notes, starting on a lower middle C and ascending stepwise. The notes in both hands are perfectly aligned in time, creating a dense, shimmering texture.

When you are using this technique to play melodic phrases, you don't have to alternate every note in the phrase. Use alternate hands to play the repeated notes (*Example 28*).

Example 28

Bass Pattern
Quick Swing

The musical notation for Example 28 is written in bass clef and 4/4 time. It features two staves, R.H. and L.H. The R.H. staff contains a melodic line with eighth notes and quarter notes, including some beamed eighth notes. The L.H. staff contains a bass line with quarter notes and eighth notes, often playing in unison with the R.H. line. The piece is titled 'Quick Swing' and includes a 'Bass Pattern'.

Arpeggios with Unison Tuning

With your keyboard setup for unison tuning, you don't have to worry about overlapping hand positions when playing dovetail voicings. You have the freedom to play any notes in the voicing with either (or both) hand(s).

Arpeggios, glissandos, and pyramids sound great when played on a unison tuned keyboard. You can develop patterns that are even more intricate than the dovetail voicings we looked at earlier, since there is no overlapping of the hands. Also, your patterns can contain repeated notes or true unisons. Take a look at this basic guitar finger picking pattern (*Example 29*).

Example 29

Split Unison Tunings

Quickly

A11(no3)



Simple finger picking pattern. Tempo and repeated notes make it awkward to play on the keyboard.

As simple as it is, it could be a real knuckle buster if you try to play it as written with one hand. However, you can easily split it between two hands like this (Example 30) :

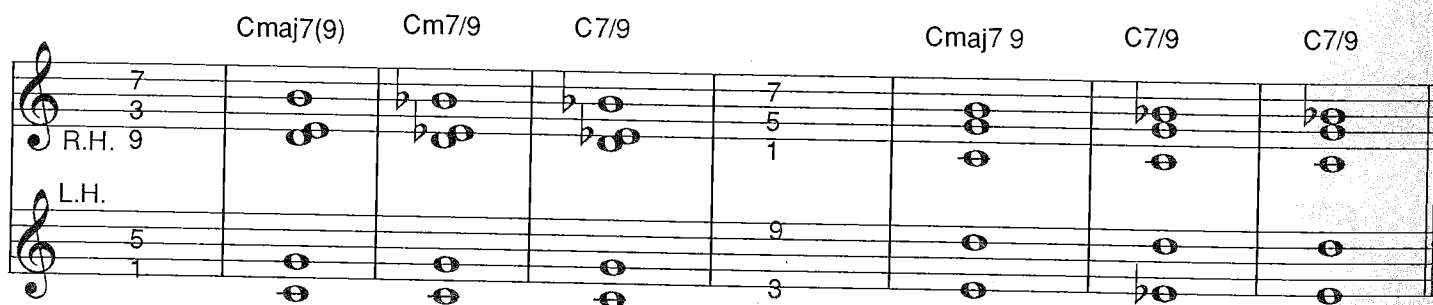
Example 30



2nd.

Now it's easy to play with precision. For finger picking parts like this, I like to voice the chord with five notes, two in the left and three in the right (Example 31).

Example 31



This is a fingering pattern I like to use (*Example 32*).

Example 32

Finger Picking Patterns

Cmaj7/9

Learn to play as 8ths & 16ths

You can create many unique finger picking patterns by alternating chord or scale tones in the right hand against the root and fifth of a chord in the left hand (*Example 33*).

Example 33

Finger Picking Alternate Root & 5th

A9 Asus A9(no7)

Red. Red. Red.

Red. Red.

Permutation Patterns

You can play arpeggio patterns that cycle through several different permutations before they repeat (similar to the dovetail patterns we looked at above) (*Example 34*).

Example 34

Permutation Patterns

Em9

Crossing The Split Point

So far, all of the examples given have kept the left hand below the split point (and the right hand above it). You can cross the split point to get some nice variations on many alternate hand parts. For instance, if your left thumb plays above the split you can add bass notes to your patterns that would otherwise be difficult to reach. In *Example 35*, the low G note in the ostinato part of this finger picking example makes it awkward to play, even with two hands.

Example 35

Split the keyboard at F2 like this (Figure 9):

Mode		A		B		Total volume	Balance	Dual detune	Split point
Voices	Split	Internal	1	Internal	1	99	0	-	F2
		ACOUSTIC 1		ACOUSTIC 1					
	Note shift	+24	0						
Controllers Assign	Sust. FS	On	On	Pan Mode	Range	Select			
FS2	Portamento	SOFT P. RANGE	-	On	On	A:0n / B:0n	0	LFO	
CS 1	Output Balance (A/B)		Off	Off					
CS 2	Dual Detune		Off	Off	Key	EG Rates	99	99	99
						Levels	50	50	50
Micro tuning	Preset 1	Off	Off						
	Equal Temperament								

Figure 9: This unison tuning splits the keyboard at key F2.

Now you can play that low G comfortably with your left thumb (Example 36).

Example 36

Experiment with different voicings that place the left thumb above the split point (Example 37).

Example 37

Shuffle

Play with glissandos throughout.

High G in L.H. sounds two octaves lower than written.

Play these patterns "straight" and shuffled. Experiment with off beat accents in left hand.

More examples of thumb split point

The image shows a musical score for a keyboard instrument, consisting of two staves in 6/8 time. The top staff is in treble clef and the bottom staff is in bass clef. The score is divided into four measures. The first measure is labeled 'Am' and the second measure is labeled 'G'. Each measure contains a sequence of notes: a quarter note on the first line (F4), a quarter note on the second line (G4), a quarter note on the second space (A4), and a quarter note on the third line (B4). The notes are connected by stems and beams. Below the bottom staff, there are four symbols, each consisting of a horizontal line with a small vertical tick mark underneath, representing a thumb split point. The first symbol is under the first measure, the second under the second measure, the third under the third measure, and the fourth under the fourth measure.